Mineral Resources Group

660 BANNOCK STREET DENVER, COLORADO 80204



A-0347

INTER-COMPANY CORRESPONDENCE

To:

F. J. Laird, Jr.

Date:

Sept. 6, 1978

From:

Jack Whyte of

Subject:

Rico Project - Water Analyses

I have reviewed the analytical results for the Rico project water samples taken on August 14, 1978.

These are summarized on the attached table. The original lab data sheets are also attached.

The only parameters showing a significant contribution from the operations are Zinc, Sulfate, and Fluoride.

The pertinent sampling results were compared to EPA's Ore Mining and Dressing Effluent Guidelines. Based on the single sample only, the "Pond Discharge" meets all limitations with the exception of the 30 day average Zinc standard.

At the time of our sampling, the Blaine Tunnel discharge was being diverted inside the mine and discharged with the St. Louis Tunnel water. If discharged directly, the Blaine Tunnel wastewater would (based on the single sample) violate the 30 day average Zinc limitation.

The operation has an NPDES permit. The analytical results indicate that the "Pond Discharge" would violate the 30 day average Zinc limitation.

The Blaine Tunnel, if directly discharged, would violate the maximum Zinc limitation. The permit limitation is 0.25 mg/l - the 8/14/78 sample shows 1.38 mg/l. No 30 day average limitations are included in the Blaine Tunnel permit.

The permit also contains requirements as outlined below:

Page 6 of Permit (copy attached)

Permit shall be amended to cover wells and other mine discharges. This has not been done.

Page 14 of Permit (copy attached)

A flow measuring device shall be installed at each discharge

point. This has not been done.

Page 16 of Permit (copy attached)

- 1. Wastes will be disposed of in a manner so as to prevent any pollutant from such materials from entering and polluting the waters of the State of Colorado.
- 2. A dam stability and seepage study is required before any tailings can be disposed of.
- 3. Remedial measures are required before existing tailings ponds can be used again.
- 4. A reclamation/stabilization plan must be submitted for all disturbed areas that have resulted from the permittee's activities since July 1, 1969. I am not certain if plan has been filed but no evidence of reclamation activities are evident.

The only explanation for the laxity in state enforcement of permit conditions is that the operation is shut down. Should Anaconda become involved here to a sufficient degree, one can be sure that all permit conditions will be enforced.

xc: J. F. Anderson

F. C. Tidball

D. C. Himelsbach

J. C. Wilson

R. L. Dent

J. L. Yeager

DATE SEPT	6, 1978 SUBJE			ANALYSES	PLANT	
	SAMPLED	8-14-78	3		BY JRW.	FILE

CONCENTRATIONS IN MILLIGRAMS PER LITER

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	Dolores R ABOVE OPERATIONS	ST. LOUIS TUNNEL	BLAINE (!) TUNNEL	Well DB-6	SETTLING	POND DISCHARGE		Dologes R. Toelow OPERATIONS	SILVER CK. ABOVE OPERATIONS	COIDELINE S	
						TOTAL	DISS.	100.00 B	S B	MAX	AVG
IRON	0.020	0.015	0.013	0.035	0.021	0.188	0.013	0.015	0.016		
ZING	0.005	1.38	1.38	0.056	0.90	0.90	0.84	0.083	0.006	1.50	0.75
GRASR	0.003	0.005	0.003	0.009	0.004	0.000	0,002	0,003	0.003	0.30	0.15
LEAD	10.01	(0.01	(0.01	0.026	(0.01	(0.01	(0.01	(0.01	(0.01	0.60	0.30
เลองกางเก	0.001	0.010	0.007	0.002	0.007	0.005	0.005	(0.001	(0,001		
SILVER	(0.001	0.00/	0.001	0.003	0.00/	0.001	0,001	(0.00/	20.001	,	
Nickel	(0.005	10.0as	0-003	0.003	0.003	<0.00S	<0.005	(0.005	(0.005		
MERCRY.	0.0002	K0,0002/	(0.0002	(0.∞02	(0.0002	(0.0002	(0,0002	< 0.000Z	(0.0002)	0.002	0.001
SULFATE	36	587	810	934	664		725	115	4.1		
FLUORIDE	0.20	2.32	1.35	1.26	2.90		2.45	0.50	(0.10		
ARSENIC	(0.01	(0.01	(0.01	0.03	ره.01	ر٥.٥١	(0.01	(0.01	٥٠.0١		
PH.	8.21	7.53	6.70	6.94	7.61		7.43	7.55	8.30	12AN	9.0
		-		:		.,					

Permit No: C0-0029793

County: Dolores

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"), and the Colorado Water Quality Control Act (CRS, 1973 as amended, 25-8-101 et. seq.)

the Rico Argentine Mining Company,

is authorized to discharge from the mill located approximately one (1) mile upstream of Rico on Silver Creek, and from the Blaine Tunnel and St. Louis Tunnel,

to receiving waters named Silver Creek and Dolores River,

in accordance with effluent limitations, moritoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit shall become effective thirty (30) days after the date of receipt of this permit by the Applicant.

This permit and the authorization to discharge shall expire at midnight, December 31, 1980.

Signed this let day of June 1.776

COLORADO DEPARTMENT OF HEALTH Division of Administration

Robert D. Siek

Assistant Director, Department of Health

Environmental Health

Page 6 of 16 Permit No.: CO-0029793

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

- 5. Effective immediately, the permittee is directed to have no discharge from the heap leaching operation, including the leaching heaps and all appurtenances to or processing facilities associated with said operation.
- 6. No discharge is authorized by this permit for any other discharge points, including other mine drainages, wells, or produced waters resulting from exploration practices. The permittee shall file separate applications or amendments to the existing permit application for any such existing or anticipated additional discharges.

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OTHER REQUIREMENTS (Continued)

B. General

At the request of the Regional Administrator of the Environmental Protection Agency or the Director of the State Water Quality Control Division, the permittee must be able to show proof of the accuracy of any flow-measuring device used in obtaining data submitted in the monitoring report. The flow-measuring device must indicate values within ten percent of the actual flow being measured.

The limitations stated in Part I, Section A, are calculated on the basis of gross measurements of each parameter in the designated discharge regardless of the quantity and quality of these parameters in the plant inflow.

If the permittee desires to continue to discharge, he shall reapply at least 180 days before this permit expires.

Within 60 days of the issuance of this permit, the permittee shall file a statement with the Environmental Protection Agency and the State of Colorado which shall contain the names of the person or persons who are designated to report conditions as noted in Part II, Seciton A, Paragraph 2a (Noncompliance Notification), and as noted in Part II, Section B, Paragraph 7 (Oil and Hazardous Substance Liability).

Within three (3) months after the date of permit issuance, a flow-measuring device shall be installed at each discharge point to give accurate measurement of the effluent flow rate(s).

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OTHER REQUIREMENTS (Continued)

D. Mine and Mineral Processing Solid Wastes

1. General

Tailings, spoil, and all other mining and mineral processing solid or slurry wastes shall be disposed of in a manner so as to prevent any pollutant from such materials from entering and polluting the waters of the State of Colorado.

2. Tailings

No tailings shall be deposited by the permittee in any tailings disposal facility, new or existing, prior to sixty (60) days following submittal to the permit issuing authority by the permittee, of a certified document, signed and sealed by a Professional Engineer registered in the State of Colorado, who is competent in the field of dam and embankment stability. Said document shall provide detailed evidence of field investigation(s) of said facilities and a stability and seepage analysis. Said document shall state the maximum allowable height (elevation) and volume of each tailing facility. It shall identify existing heights (elevations) and volumes of stored materials and the physical/chemical characteristics of those materials existing and intended to be deposited that relate to the embankment stability, seepage and pollutional characteristics of any seepage from such facilities. The stability analysis shall evaluate the potential of failure due to flood, landslide, seismic activity, erosion, and failure of adjacent or nearby facilities, and it shall identify the safety factor obtained for each analysis of each structure. For any structure found to be structurally unsuitable under its existing condition, or under conditions anticipated to occur during operation or retirement, specific plans for remedial measures to upgrade said structures shall be prepared and submitted as a part of the documentation required.

3. Remedial Measures

Specific plans for remedial measures or construction as identified above (III, D.2.) shall be submitted by the permittee with an implementation plan and schedule of compliance for their completion. Such remedial measures shall be completed prior to utilization of any tailings disposal facility to receive additional tailings. Upon approval of the implementation plan by the permit issuing authority, the schedule of compliance shall be a condition of this permit.

4. Stabilization Plan

The permittee shall submit to the permit issuing authority detailed and documented evidence of the existence of and submittal to proper authorities in the State of Colorado, a reclamation/stabilization plan for all disturbed areas that have resulted from the permittee's activities since July 1, 1969.